

Alignment of Pantothenate Synthetases From Corn, Eucalyptus, Soybean, Tulip, Wheat, Rice, and Lotus

SEQ ID NO:2	cpj1c.pk005.c12fis	[corn]
SEQ ID NO:4	crin.pk0125.c12fis	[corn]
SEQ ID NO:7	eej1c.pk005.p14fis	[eucalyptus]
SEQ ID NO:9	ssl.pk0021.d7fis	[soybean]
SEQ ID NO:11	etb1c.pk004.j20fis	[tulip]
SEQ ID NO:13	wlm96.pk036.k8fis	[wheat]
SEQ ID NO:14	gi2292978	[rice]
SEQ ID NO:15	gi2292921	[lotus]

  

1	90
SEQ ID NO:2	MAAAAA-----VHEPEVIRDKAAMRAWSRRRRRAEGKAVLPTMGFLHEGHLSLISAAVAAS-AGPIAVVSVIYNPSQFAPTEDLA
SEQ ID NO:4	MAAAA-----VHEPEVIRDKAAMRAWSRRRRRAEGKAVLPTMGFLHEGHLSLVSAVAAS-AGPVAVVSVIYNPSQFAPTEDLA
SEQ ID NO:7	MAAPP-----KEPLVITDKAEMREWSRSARRQGRRTIALVPTMGFLHEGHLSLVREARRADA----VVSVIYNPGQFAPSEDL
SEQ ID NO:9	MAPAP-----R----VISDKASMRWSRSRMRQAQKLGILVPTMGFLHAGHLSLVAQARQLSDV----VAVSIYNPGQFAPTE
SEQ ID NO:11	MAAAPASAAAAASVSEPVIITSKPEMLAWSRRHRRLSHTIALVPTMGSLHAGHLSLISHAASLADLT----VVSIIYNPTQFAPSEDL
SEQ ID NO:13	MAAAG-----EPEVIRDKAAMRAWSRRRRRAEGKTVLPTMGFLHEGHLSLVSA--AAV-PGPVAVVSVIYNPSQFAPTE
SEQ ID NO:14	MA--P-----M----VISDKDEMRSRMRSSQKLIALLVPTMGFLHEGHLSLVRDAHNHADL----VAVSIYNPGQFAPTE
SEQ ID NO:15	MAAP-----REPEVIRDKAAMRAWSRRRRRAEGKTVAVVPTMGYLHQHLSLISAAAAAASADPVAIVVTIYNPSQFAPSEDL

  

91	180
SEQ ID NO:2	TYPDFAAGDLRLKLAAT-GVVAAVFCPPDLVVRGSA--DRPSAAGASGGAVSCLEDAGGHAHETWIRVERLEKGLCGSSRPVFFRGVATV
SEQ ID NO:4	TYPDFAAGDLGKLAAT-GVVAAVFCPPDLVVRGSA--DRPSAASASGGAVSCLEDAGGHAHETWIRVERLEKGLCGSSRPVFFRGVATV
SEQ ID NO:7	TYPDFFEGDLGKLRAVPGGVVFRPNLYDYGQREV-GSGVESDNGSVSCLEEK-GMGHEAWVRVERLEKMGCKSRPVFFRGVATV
SEQ ID NO:9	TYPDFFDGDVKKLASVPGGVVFRPNLYDYGKNGGG-DVAEAGG--MVSCVE--SGSCHESWVRVEKLELGLCGKSRPVFFRGVATV
SEQ ID NO:11	TYPADLAADLRNLRAAC-PSVAAVFCPTNPY-----ADGHETWVRVEELERGLCGLSRPVFFRGVATV
SEQ ID NO:13	TYPDLAGDLRLKLAAT-GAVHAVFNPPDLVHRGAASVGRRAEAPAGAAASCCLE-AGDGHETWIRVERLEKGLCGASRPVFFRGVATV
SEQ ID NO:14	AYPSDFQGLQKLMSPVPGGVVFRPNLYDYGGDGD-AVAECGGDVVSCVDRRSFGFHTWVRAEKLEKPLCGKSRPVFFRGVATV
SEQ ID NO:15	TYPDFAAGDLRLKLAAT-GVVDVAVFNPPDLVVRGA--GRRGAGS--GGAI SCLEAAGDGHETWVRVERLEKGLCGASRPVFFRGVATV

FIG. 1A

181 270  
 SEQ ID NO:2 AKLFNIVEPDVAVFGKKDYQQWRVICRMVRDLDFAIQIVGSEVVREADGLAMSSRRNVNLSEEDRKKALSIERSLVDARTAAALSGSNR-SQ  
 SEQ ID NO:4 AKLFNIVEPDVAVFGKKDYQQWRVICRMVRDLDFAIQIVGSEVVREADGLAMSSRRNVNLSEEDRKKALSIERSLVDARTATLGSNR-SQ  
 SEQ ID NO:7 TKLFNIVEPDVAVFGKKDYQQWRRIIRLV-NLDFSIIQIVGSEVMRDHGLALSSRRNVHLSPEEREKALSIERSLRAKSAAEKG-QVNCQ  
 SEQ ID NO:9 TKLFNIVEPDVAVFGKKDYQQWRLIQRMVRDLDFSIIKVIQIVGSEVMRDHGLALSSRRNVHLSPEEREKALSIERSLRAKSAAGDG-QVHCE  
 SEQ ID NO:11 SKLFHLVEPDVAVFGKKDYQQWRVIEKMRDLDFPVRIVGSEIVREVVDGLAMSSRRNVLTPEEREKALSIERSLRAKVAQAQNGSSS-CQ  
 SEQ ID NO:13 AKLFNVVEPDVAVFGKKDYQQWRLIQRMVRDLDFAVEIIGAEIVREADGLAMSSRRNVHLSPEEREKALSIERSLRAKVAQAQNGSSSASE  
 SEQ ID NO:14 TKLFNIVEPDVAVFGKKDYQQWKIIQRMVRDLDFSIIKVIQIVGSEVIREKDGAMSSRRNVHLSPEEREKAVSINKSLFRAKSAAGDG-QIHCE  
 SEQ ID NO:15 SKLFNIIIEPDVAVFGKKDYQQWRVILPYWSGLDFGIEIMGSRNCARTDGLAMSSRRNVHLSREEGKKALSIERSLVDARTGALKG-NTDSK

271 325  
 SEQ ID NO:2 EIKDQIVRTITEAGGQVDYVEIVGQESLVPVERMDRPCVICVAAWFGKVRLLIDNIEIHVDSSTVLSI  
 SEQ ID NO:4 EIKDQIVRTITEAGGQVDYVEIVEQESLVPVERMDRPCVICVAAWFGKVRLLIDNIEIHVDSSTVLSI  
 SEQ ID NO:7 NLKDSVIAIQEAGGKIDYAEIVDQESLEAVEEIRSPVSCVAAWFGKVRLLIDNIEIN-----V  
 SEQ ID NO:9 KLTLNLVQSITDAGGRIDYAEIVDQNNLEKVEQIKSPVFCVAAWFGKVRLLIDNMEINLS-----MNV  
 SEQ ID NO:11 ELKDIAIQSITDAGGRIDYAEIVDQESLKVLDITSPVVMCIAAAGFNVRLLIDNMEI-----TI  
 SEQ ID NO:13 HIKDQIVQTLTTEAGGRVDYVEIVEQESLVPVETIDRPVVICVAAWFGKVRLLIDNIEIHQS-----  
 SEQ ID NO:14 KLINLVVQSITDAGGRIDYAEIVDQNNLEKVEWIKGPVFCVSAWFGKARLLIDNIEINL-----  
 SEQ ID NO:15 QIKNKIVQTLTETGGQVDYVEIVEQESLVPVEQIDGPVVICVAAWFGKVRLLIDNIEIDTRS-----

FIG. 1B